LECTURE

# Perspectives in Medical Education 9. Revisiting the Blueprint for Reform of Medical Education in Japan

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**Reform of medical education at Keio University has been underway since 2003. We measure the progress made since then in five specific categories that span fifteen recommendations presented in our "Blueprint for Reform" at the outset of the effort. These are effectiveness of leadership, curriculum reform, recognition of teaching, clinical competence, and comprehensive training in general internal medicine (GIM). First, effective leadership is being sustained through a succession of Deans, although a potentially crippling loss of leadership in the Department of Medical Education must be offset through timely appointment. Second, curriculum reform is awaiting the implementation in 2012 of an integrated, organ system-based curriculum with an emphasis on ward clerkships, but the introduction of PBL has been delayed indefinitely. Third, teaching is being recognized through the use of student feedback to reward good teachers and through funds for six full-time equivalent salaries dedicated to medical education, but promotions still depend exclusively on research, without consideration of teaching ability. Fourth, clinical skills training is still lacking, although enthusiasm for it seems to be building, thanks to the presence on the wards of a (still miniscule) cadre of dedicated teachers. Finally, exposure to GIM remains non-existent; however, visionary leadership in a newly-independent Emergency Department and the wide variety of medical problems seen there provide a remarkable opportunity to craft a uniquely Japanese solution to the problem. The changes implemented to date are impressive, and we remain enthusiastic about the future, even as we recognize the magnitude of the task that lies ahead.** (Keio J Med 59 (2) : 52–63, June 2010)

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## Introduction

In a series of reflective papers based on our experiences over the past six years at different locations and in disparate settings in Japan, we have documented the problems that bedevil medical education in Japan.[1–8] Looking back, we are conscious that a journey that started out as a voyage into the unknown has evolved into a voyage of discovery that has, in all humility, enriched, informed and educated us in a way that we never imagined when we embarked upon it. One of the more amazing aspects of this voyage has been a recurring theme involving the willingness of those in the field of medical education at every location we visited in Japan to accept the deficiencies in the system and to enthusiastically embrace the need for reform.

Nowhere has this enthusiasm been more apparent to us than at the institution with which we have had the longest and most productive association: Keio University School of Medicine in Tokyo, one of Japan's premier institutions for medical education. The strength and durability of this association is reflected in the first four pa-

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pers in this series, which were devoted exclusively to observing, analyzing, and critiquing the state of medical education at Keio University, often with brutal candor. So much so that some were moved to criticize that very candor as being excessive or misplaced (i.e. a "misperception").[9]

It is a criticism that may seem, at first glance, to be reasonable and deserved, particularly in the context of a country like Japan, where courtesy is both renowned and revered, and where, until relatively recently, the perspectives of outsiders were dismissed as being blind to the realities and traditions of Japan, and thus characterized, quite accurately, as "misperceptions". Thus, it is equally reasonable, in that first glance, to conclude that our harsh and unforgiving assessment of the state of medical education at Keio University in 2003 might be a product of our inability, as quintessential outsiders, to understand the uniquely Japanese constraints to reform. Add to that a reflexive and not unnatural desire of the criticized to dismiss the harsh truth out of a dislike for facing reality and the perception of unjustified harshness becomes understandable.

None of this, however, is applicable in the context of our experiences at Keio –or, for that matter, at the other locations in Japan where we have made similar assessments.[6,7] In the first place, any careful reader of our papers will discern that we have taken great pains to place our criticisms in the context of Japanese traditions and practices. In the second, our criticisms were neither rejected nor resented, but welcomed and accepted by those who might be in the best position to judge whether or not they were appropriate or unfounded. This is particularly true of the authorities at Keio University, where the ungrudging acceptance of our criticisms has held true over six years and a succession of three different Deans, starting in 2003 with Professor Kitajima, continuing with his successor, Professor Ikeda, up to and including the current incumbent, Professor Suematsu. Dean Suematsu, in particular, has taken the reform process started by Dean Kitajima a step further, infusing the effort with a new-found energy and advancing it into territory that we ourselves had deemed impossible or impractical (as we will outline later). We would humbly submit that, had our criticisms been truly unjustified (or a misperception), we would not have the privilege, as we do now, of continuing our ongoing involvement in the reform effort at Keio, let alone of maintaining the enduring friendships we have developed there. We are, therefore, content that those in the best position to judge or be offended by our initial unforgiving critique view it as being appropriate and justified and our perspectives as being valid.

Our initial perspective in 2003 on the state of medical education in Japan in general, and at Keio University School of Medicine specifically, was the starting point for this series of papers. That perspective continues to be informed and molded by our ongoing contacts and experiences in Japan, which are the basis for the overarching case we have made for the pressing need for reform in Japan.[3,4]

One continuing theme in the evolution of our perspective –and the area for which we continue to reserve our harshest criticism– is the virtual lack of interactive or clinical teaching in Japan and the resultant lack of clinical skills in Japanese students and residents. It is manifest most tellingly in their inability, with rare exceptions, to take a minimally acceptable history or perform the most basic physical examination. It is no surprise, then, that they remain, for the most part, unable to engage in even the simplest aspects of clinical decision-making or problem resolution through deliberative reasoning. While much has changed since our first visit, this inability still persists, in our minds, as the biggest deficiency in Japanese medical education. It cries out for a remedy, but no easy remedy is to be found. Yet, we see on this visit the first inkling of a possible answer to the cry, as we will outline later.

The focus of this paper will be on what has changed since our first visit to Keio in 2003. Like all its predecessors, the paper is based on a report we submitted to our hosts upon the completion of our visit. Its primary objective is to place on record, in the same spirit of candor and intellectual honesty of our earlier papers, the changes that we are now witnessing at Keio. A secondary objective is to place on record our own excitement and enthusiasm for the progress in the reform effort that is underway, without minimizing in any way the monumental task that lies ahead.

## Creating a Yardstick to Measure the Progress of Reform

In order to document the individual reforms introduced to date at Keio since our first visit, and to measure the progress that has been made since then, we need a credible yardstick against which success or failure can be assessed and measured. For this purpose, we will adapt a technique that has served us well in other such evaluative exercises in this series (e.g. at the Muribushi Project in Okinawa[6] and at Teine Keijinkai Hospital in Sapporo[7]). In both those instances, given that both programs were of very recent origin, we were able to locate published source documents that identified their respective goals and objectives. Those self-determined criteria were then used to create a unique yardstick for each program against which success in meeting their own goals could be measured.

In the case of a long-established program like that at Keio University School of Medicine, the absence of a similar source document dictated the need to create a valid and credible alternative. We decided, therefore, to use our own earlier criticisms and, more specifically, the

"Blueprint for Reform" that we developed for Keio, outlining the specific areas where change was most feasible and would have the greatest impact.[2] The recommendations enumerated in that document will be used to create a similar yardstick of success or failure for the reform effort at Keio.

Readers interested in the specific details relating to each of those recommendations are directed to that earlier paper.[2] Here, we simply present an overview sufficient to provide an understanding of the **four steps** through which we create the yardstick that we will be used to measure the progress of the reform effort.

❖ **The First Step** is to understand the two thematically distinct categories into which the fifteen individual recommendations previously published in our earlier paper[2] are divided (readers are directed to the twin Appendices of that earlier paper, if they wish to review the basis and justifications for those recommendations). Those two themes are recognizable, even if they are not quite as explicitly defined, as the following:

**a.** Recommendations to change the system of medical education at both the undergraduate and graduate level through the specific measures, (i.e. changing the way that medicine is taught at Keio);[2]

**b.** Recommendations to change prevailing attitudes toward medical education among the faculty at Keio through the specific measures (i.e. changing the way need for reform is perceived by students and faculty at Keio).[2]

❖ **The Second Step** is to formulate a framework for documenting the changes that have been implemented at Keio University School of Medicine since 2003. To do this, the fifteen individual recommendations will be restated in more concise terms and reorganized according to the two themes above into a more coherent frame of reference, as follows:

**a.** ***Recommendations for Changing the System of Medical Education during***

➢ ***In Residency (Graduate Medical Education)***

**i.** Emphasize Active Learning

**ii.** Emphasize History and Physical exam skills

**iii.** Introduce a system of non-threatening, anonymous feedback

**iv.** Emphasize the importance and value of teaching by (i) requiring faculty accountability and responsibility for teaching, and (ii) rewarding teaching and teachers

**v.** Focus on providing GIM Training for Residents

➢ ***In Medical School (Undergraduate Medical Education)***

**vi.** Make the curriculum more interesting and interactive by

(a) Introducing Problem Based Learning, starting in the 3rd yr preclinical courses in medical school

(b) Shortening the preclinical curriculum to increase time for clinical training, and

(c) Introducing core courses on physical diagnosis for students

(d) Reducing the emphasis on didactic teaching

**vii.** Make the curriculum more integrated (i.e. organ systems-based rather than subject-based)

***b. Recommendations for Changing Prevailing Attitudes at Keio***

**i.** Establish a sense of urgency

**ii.** Form a Powerful Guiding Coalition at Keio University

**iii.** Create a vision for change and communicate that vision

**iv.** Empower students so that they become engines for change

**v.** Develop clear strategies for Medical Student Education by (i) recognizing teaching as a legitimate academic activity and an essential ingredient of academic life, and (ii) rewarding excellent teachers both academically and financially

**vi.** Introduce a system for anonymous evaluation of teachers by students

**vii.** Increase exposure to ER training, to make better use of the only location at Keio where broad-based (non-specialist) clinical care is practiced

**viii.** Provide training in Bedside Clinical Instruction for existing faculty

❖ **The Third Step** is to distill these fifteen individual recommendations down to the five major categories listed below:

**1.** ***Provide effective leadership*** {items 2(i), (ii), (iii) and (iv) above}

**2.** ***Reform the Medical School Curriculum*** to make it both integrated and interactive{items 1(i), (vi), (vii), above}

**3.** ***Recognize teaching*** as being vital for medical education at both undergraduate and graduate levels {items 1(iii), (iv), and 2(v), (vi) above}

**4.** ***Make clinical competence a key component of medical education*** for students, residents and faculty {items 1(ii), and 2(viii) above}

**5.** ***Emphasize a comprehensive understanding of clinical problems*** through exposure to general internal medicine instead of the existing narrow, subspecialty-based clinical perspective {items 1(v), and 2(vii) above}

❖ **The Fourth and Final Step** is to rewrite those five categories above in the form of five questions that constitute a credible and comprehensive yardstick for

measuring the progress of the reform effort at Keio University School of Medicine since 2003. They are the headings of each section that follows, under which we will document the changes we have encountered, and what remains to be done, so that the answers to those five questions, when taken together, will provide a comprehensive overview of the current state of medical education at Keio (as of 2009).

## 1. How Effective is the Leadership at Keio University School of Medicine?

Six years have passed since our first unremittingly bleak assessment of the state of medical education at Keio. Six years later, we can state categorically that the landscape for medical education at Keio is so different that we find it difficult to comprehend. For this, leadership must receive most of the credit.

**i.** Pace of reform: While the pace of reform remains agonizingly slow on a larger scale, what has been achieved to date is nothing short of astounding to us, who have watched the effort evolve from its first, uncertain beginnings, and stutter through a series of fits and starts, to now reach a point of self-sustaining momentum that will, hopefully, gather speed in the years to come. The changes that we will document individually below are testament to this, reflecting directly on the quality and effectiveness of the leaders of the reform effort initiated by Dean Kitajima and continued under Dean Ikeda. However, it is under the leadership of Dean Suematsu that we are seeing a ramping up of the reform effort because he has injected a fresh dose of enthusiasm and dynamism into the process.

The noticeable acceleration of the reform process during Professor Suematsu's tenure as Dean is a key factor in preventing the stagnation that would be inevitable had the initial reform decisions taken by Dean Kitajima not been expanded and improved upon, as we will describe below. A side effect of it is that it has both reinforced our own interest in and re-invigorated our association with the effort to reform medical education at Keio. This enthusiasm is born from the realization that there now exists an opportunity to extend the reform effort to areas that we hitherto thought to be neither feasible nor practical.

**ii.** Evidence of innovative leadership: One striking example of how the leadership at Keio University is set to change the culture and challenge established tradition is in the way that candidates for medical school are selected. It has come as a very pleasant surprise to us that Keio University is beginning to recognize the very real limitations of the traditional selection process for admission to medical school in Japan.

On this visit, we conducted two sessions that addressed this very subject. Both were really well attended, and at both there was a vigorous and healthy discussion on the need to rethink the process through which candidates are selected for admission to Keio University School of Medicine. The most interesting aspect of these discussions was that they occurred in the context of presentations that focused on the meaning of "Professionalism" for physicians in Japan.

That there should be any discussion of such a subject is in itself astounding, because Professionalism is a concept that is alien to the mission of Japanese medical schools, where the focus remains exclusively on book knowledge. It is a very welcome sign that faculty members at Keio should recognize that excellence as a physician transcends academic performance and that Professionalism is a concept that embodies so much more than knowledge or intellectual ability.

Such innovative thinking provides further evidence of the willingness of the leadership at Keio to confront such difficult issues and go against tradition to make changes in the best interest of the institution. It also signals that Keio may be ready to challenge the long-established Japanese tradition of measuring ability on book knowledge alone, whether it is in evaluating an established physician or selecting a candidate for admission to medical school. If the latter process is reformed to include other dimensions of excellence and achievement, it would inevitably lead to the creation of a cadre of young physicians who, as the beneficiaries of such progressive thinking, may have a greater interest in nurturing and furthering reform in the decades to come. After all, there could be no better way of empowering students to become engines for future change in medical education (one of the key elements of our recommendations for leadership in our "Blueprint") than to change their own perception of what constitutes an "excellent" physician.

**iii.** Evidence of dynamic leadership: The recent creation of a School of Graduate Medicine is another example of "outside-the-box" thinking in leadership at Keio. Its purpose is to provide full tuition scholarships for the brightest young minds at Keio Medical School who decide to pursue a combined MD-PhD degree and dedicate their lives to a career in research. Thus it codifies in a unique and distinctive manner the delineation of a career track that is based on research potential and achievement.

At first glance, this may seem redundant since the only career path to academic success in Japan is one that goes through research. What is interesting about this move, however, is something that is less obvious, but just as definite. After all, if it codifies a career track to academic success for candidates who make an early commitment to research, it must codify, just as clearly, an alternative career track that is not necessarily dependent on dedication to research. Thus this move might actually turn out to be the first step to recognizing that there could be two separate academic career tracks.

We are very well aware that such a delineation of the

twin alternatives is still so subtle in even our minds as to be no more than the most remote of possibilities at this point. Nevertheless, the fact that it is possible to contemplate such a future delineation of academic career tracks, no matter how subtle it might be, is a first for Japan, where only one track exists for academic success. One can only hope that, with time and the maturation of the School into a viable pipeline for true physician scientists with impressive research credentials, the delineation will go from remote possibility to reality. That would, indeed, be a truly pioneering development for medical education in Japan.

**iv.** Loss of leadership: Notwithstanding all the notable positives since our first visit in 2003, there is one major negative. It is the recent retirement of Professor Takahiro Amano as Head of the Department of Medical Education. His departure has deprived the reform effort of a true stalwart, an unflinching visionary who both fueled and drove the reform effort from its outset. His absence, at this critical juncture, will be sorely felt. Only time will tell if the immense void left with Professor Amano's retirement can be filled or if it will stall the reform effort.

Nonetheless, we remain optimistic about the future, for several reasons. In the first place, Professor Amano will continue his association with Keio University in a consultative capacity. This will hopefully provide a degree of continuity and with it a modicum of reassurance that the reform effort will not die with his retirement. Secondly, the interim appointment of a close personal friend of his to the position allows him to be involved in the process without treading on toes. Thirdly, the appointment of Dr Michito Hirakata to the Department of Medical Education with a full-time commitment to teaching is a step in the right direction, although his relative inexperience in the field means that he will face a very steep learning curve while on the job! Finally, the personal involvement of Dean Suematsu in the reform effort mitigates this otherwise grievous body blow to the effort. He is the Principal Investigator on a multimillion yen grant to implement competency assessment during residency training. This should assure that he will continue to maintain a hands-on interest in the reform effort.

***Summary of the Current State of Leadership Compared to 2003:***

*What has changed*: Nothing, in the best possible sense of the word; it remains dynamic at the top and highly committed to building upon and expanding the reform process. Thus, the commitment to reform appears to be unchanged in a very positive sense at the level of Dean. However, the retirement of Professor Amano at the Department of Medical Education remains a serious concern. His shoes will be extremely hard if not impossible to fill.

*What remains to be done*: The void in leadership in the Department of Medical Education must be filled quickly and effectively with a permanent replacement of the current interim arrangement. Professor Amano's retirement comes at the worst possible time, when the reform effort is reaching a crucial juncture. His continued involvement in a consultative capacity is important, but it could be so much better if he is awarded Emeritus status. Even though he is eminently qualified for it, considering his immense contributions, he cannot receive it under Keio University's rigid rule requiring a 15 year minimum tenure as full Professor for Emeritus status. A seismic change in University policy is called for, in recognition of the fact that the quality of contributions, not time, should determine qualification for such an honor –not to mention the continued best interests of the University itself!

## 2. What is the Current State of Curriculum Reform at Keio University School of Medicine?

In 2009, the Keio University medical school curriculum is exactly the same as it was in 2003. This seemingly bleak assessment hides the truth, which is that the two major suggested reforms of the medical school curriculum in our Blueprint have been duly considered and one is close to being implemented. Specifically, two vitally important decisions have been taken to reform the medical school curriculum at Keio: to develop and implement an Integrated Curriculum, and to incorporate Problem-based Learning (PBL) into student education at an undetermined later date, once the integrated curriculum is up and running.

**i.** The Introduction of an Integrated Curriculum is closer of the two to being a reality. According to Professor Amano, who has almost single-handedly shepherded this initiative through a long and painful gestation and no doubt against deep and vociferous opposition from entrenched interests, an organ system-based curriculum is scheduled for implementation at Keio with the class of 2012. What is particularly fascinating is that the new curriculum includes a provision for shortening the preclinical years much as we have recommended,[2,5] so that clinical studies could begin as early as the fourth year of the six year curriculum, i.e. three years of clinical training, instead of two. A proposal is even on the table that the last (sixth) year should be devoted entirely to ward clerkships without didactic lectures. One can only hope that these clerkships will provide students with the needed hands-on clinical training in the wards, much like "acting internships" and senior year rotations in the major specialties do for fourth year students in the US.

A major reason that the new curriculum initiative has advanced to the point where it may become reality is the forceful backing it has received from the current Dean. He has argued with vigor for its implementation, securing tentative agreement for the envisioned changes at both the University level and the Chairs Committee. It

remains to be seen whether or not these tentative agreements translate into implementation, particularly with the retirement of Professor Amano, but both he and Dean Suematsu have assured us that it will happen.

**ii.** The Inclusion of Problem Based Learning in the Curriculum, by contrast, has hit a major roadblock, resulting in a deliberate decision only to incorporate it "at some point in the future". The roadblock has to do with two factors. The first is the lack of teachers with the knowledge and skill to either (a) develop PBL exercises or (b) conduct and facilitate them. The former problem can be solved by importing pre-prepared PBL exercises from any of several reputable sources; the latter cannot be.

The second factor is a surprising lack of appreciation of the purpose of PBL on the part of both the faculty and the students–an astonishing fact that was admitted to me by none other than Professor Amano himself. We were dismayed to learn this, because it went against everything we had come to believe about the applicability and efficacy of the PBL method in the Japanese context. It is a belief that stems from our personal experience conducting multiple PBL exercises on previous visits to Keio. The purpose of these was explicit: to demonstrate its efficacy in the Japanese setting.

Our sense was that we fulfilled that purpose every time, including one memorable occasion when one of us (RHR) facilitated a PBL resolution session *in Japanese* as a demonstration exercise before an audience of over 40 faculty members and an equal number of students, despite a complete inability to communicate in that language (the handouts, fortunately, were in English).[4] It was particularly effective because it demonstrated as nothing else could to the observing faculty (who are notorious for turning every teaching exercise into a didactic session) that the proper role of the PBL facilitator is to stay silent unless absolutely necessary.

Since these exercises were so unquestionably successful, we felt they would cement in the minds of both the students and the faculty the value and the intent of problem-based learning. Unfortunately, that belief has been confounded by the reality of the system of education in Japan, not just medical education. It is not that we were unaware of this reality; it is just that we truly expected the excitement we sensed in Japanese students for PBL would trump that reality.

The reality is, in fact, the opposite of our naïve expectation. According to Professor Amano, the all-pervasive culture of by-rote learning and an obsession with grades on the part of both teacher and taught, to the exclusion of all else, will almost certainly lead to a flourishing underground cottage industry that offers self-perpetuating PBL "solutions" for sale by seniors to juniors who want to save themselves the time and effort of developing learning objectives, researching the answers and creating handouts. The availability of such "solutions", of course, will completely defeat the purpose of PBL, which is to encourage self study and develop problem-solving skills. For this reason, Professor Amano has decided –wisely, it would seem!– to postpone the introduction of PBL to an undetermined later time.

As practical as that decision is, it is a great disappointment for us, particularly in the context of our own experiences with conducting PBLs with selected groups of students at Keio University School of Medicine. These sessions have been so uniformly successful, even exhilarating, for us as teachers, that it is difficult to accept the decision to postpone their introduction, even as we acknowledge the validity of the reasons behind the decision.

***Summary of the Current State of Curriculum Reform at Keio Compared to 2003:***

*What has changed*: Of the two major recommendations we made (Integration of the Curriculum, and Incorporation of Problem Based Learning), the first is close to being implemented. The decision to implement a new integrated (organ-system-based) curriculum in 2012 has been taken, and it is in the process of being developed. A major plus would be the increased emphasis on clinical training with a concomitant decrease in time allotted to preclinical education.

*What remains to be done*: The tentative date for implementation of the new curriculum is still three years in the future. It remains to be seen if and when it is actually implemented, but if it is, Keio will have taken a truly impressive step towards changing the face of medical education there. The prospect of losing momentum because of the retirement of Professor Amano is very real, so the personal involvement of Dean Suematsu in the process could be vital for assuring that this does not happen. The incorporation of PBL in the curriculum, however, is postponed, with no foreseeable implementation date at this time. Given the practical reasons for the deferment, we believe that, for the time being, the introduction of an integrated curriculum is the greater achievement. Its emphasis on clinical training instead of by-rote memorization of book knowledge will hopefully change attitudes enough to allow for PBL implementation at a later date.

## 3. Has There Been any Progress towards Recognizing the Importance of Teachers and Teaching at Keio University School of Medicine?

The major changes in Undergraduate Medical Education that we are now witnessing have also coincided with another change that we never thought possible: the first steps are being taken to recognize the importance of teaching at Keio. The change is more attitudinal than concrete, and we do not delude ourselves that teaching is even remotely close to being recognized as being the academic co-equal of research. However, the shift towards

recognizing teaching as a valid and valuable academic activity is now underway.

**i.** Promotions Policy: In the Blueprint we submitted,[2] we identified the Promotions Policy at Keio as one of the areas that needed major changes if the reform of medical education was to succeed. Specifically, it was recommended that the Dean set aside funds to support faculty members who dedicate their careers to teaching medical students and residents. The current Dean was at the time the Chairman of the Promotions Committee and he expressed a very palpable enthusiasm for the idea that a separate career track be created for teachers to provide promotions and rewards through a system that was insulated from the all-pervasive pressure to conduct research or perish academically.

Despite this, the truth of the matter is that there is no concrete change in 2009 compared to 2003. Research is still the only criterion for academic advancement, and quantity or quality of teaching does not figure in the equation–not even as a minimum requirement–for promotion at any level in the medical school. Even those who are given salaried appointments in the Department of Medical Education are required to get grants to support their academic activities in the Department if they are to have any hope of being promoted.

**ii.** Recognizing the Importance of Teachers: The first step in this direction was taken by Dean Kitajima who provided funds to support the salaries of two junior faculty members in the Department of Medical Education. Their responsibilities were to provide students with clinical instruction at the bedside. Under the current leadership, there has been a tripling of the number of salaried positions in the Department of Medical Education from two to six. As far as the authors are aware, Keio University School of Medicine may be unique in Japan with regard to this degree of commitment of resources to medical education.

**iii.** Changing Faculty Attitudes Towards Teaching: At its most visceral level, faculty attitudes to teaching will not change materially until its importance for promotion is acknowledged and recognized. Notwithstanding this, we have witnessed a subtle but distinct shift in faculty attitudes towards teaching! This shows itself in the enthusiasm for teaching among those of the younger faculty members at Keio with whom we had the opportunity to interact. Their enthusiasm for teaching is a most surprising development, which is enough to give eternal optimists like us hope, even though they are still in a very small minority.

It may just be that the younger faculty members have not yet had the time to think through and establish their "real" priorities. It may even be that their attitudes have not yet been hardened by the cynical realities of Japanese academic life, with its unremitting focus on research for academic advancement. However, it also means that the authorities at Keio University may now be in a position to strengthen the future of teaching at Keio in a way that was never possible before, if they are willing to seize the moment and exploit the window of opportunity it presents.

The opportunity to which we refer has to do with the budding interest in teaching that we see at Keio, and its direct correlate in the nascent "youth movement". This is because any real change in established culture and attitudes requires the infusion of new (and younger) faces, with new ideas and new approaches. After all, entrenched interests, ideas and traditions are bound to reflexively oppose any change in the status quo, because change will inevitably threaten the existing structure. New attitudes, if cultivated appropriately and given time to grow, can sweep away old ideas and outdated traditions, because youth has the great advantage of time on its side! In other words, by fostering the interest of younger faculty in teaching, the leadership at Keio can create an unstoppable momentum for change that will outlive and overwhelm the resistance from the old guard.

To do that, however, the cynical reality of academic life at Keio (that research is the only worthwhile academic pursuit) must be altered by recognizing teaching as a creditable alternative criterion for academic advancement.

**iv.** Anonymous Evaluation and Feedback: This is one aspect that seems to be lagging in the otherwise commendable first steps that are being taken towards recognizing teaching as a viable and worthwhile academic pursuit at Keio. This is shown by the fact that there is very little appreciation of the need for anonymous student feedback to evaluate teaching skills. According to our discussions with Professor Amano, only two Departments are collecting and/or using truly anonymous feedback from students to evaluate teachers and teaching: Pediatrics and Emergency Medicine. Both of these departments are blessed by the presence of forward-thinking and charismatic Chairmen who value medical education and thus use the information as part of their annual evaluation of faculty performance. However, it is conspicuous by its absence in other departments.

We have impressed on Dean Suematsu the need for a school-wide policy that calls for all departments to follow the lead of these two departments, because that would be the only way to assure that teaching will be taken seriously. In addition, the policy needs to be changed at the University level as well to include the students' evaluation of faculty as one aspect of assessing faculty performance.

**v.** Rewarding Teaching in other ways: This is another area of where we see discernable improvement since 2003. The Dean and the Department of Medical Education have established an annual Teaching Award for the best teacher in each of the last 3 years of medical school: the fourth (preclinical), fifth (junior clinical) and sixth (senior clinical) years. Selection is based on a poll of the

students, who are asked to rank all the teachers they have encountered in the year, after which there is a run-off poll of the top three nominees. The winner in each year receives an award at an annual banquet hosted for the faculty by the Dean.

***Summary of the Current State of Teaching at Keio Compared to 2003:***

*What has changed*: The emerging signs that teaching at Keio will become a *rewarding activity* are truly groundbreaking for Japanese medical education.

*What remains to be done*: The fact that it is still not *concretely rewarded* at the time of promotion is a major constraint to its appreciation by faculty as being worthwhile. Promotions Policy remains unchanged at the highest level, which is unfortunate. Thus, there is still no mechanism to incorporate teaching abilities or student feedback of faculty in the overall evaluation of individual faculty for promotion. We recognize the difficulty in changing University rules, over which the Dean has little control, but the fact remains that until such time that those change, faculty attitudes towards teaching are unlikely to change.

## 4. Is Clinical Competence a Key Component of Medical Education at Keio University School of Medicine?

The lack of the most basic clinical skills among students and residents is as legendary as it is almost universal in Japan. Not surprisingly, clinical competence is one of the two areas for which we have reserved our most severe criticisms in the past (the other, which is the lack of exposure to GIM, is discussed below).[3,4] Therefore, it is only appropriate that we revisit our earlier criticisms before we begin to evaluate whether or not any progress has been made in this area since 2003,

The gist of those is (i) that Japanese medical education remains disinterested in clinical skills training because of the heavy technological emphasis in healthcare practice (a lack of clinical interest), (ii) that there is a striking absence of practitioners who appreciate and are skilled in clinical evaluation and decision-making (a lack of clinical teachers), and (iii) that these deficiencies are most glaringly evident during residency training, because of its overwhelming emphasis on subspecialty training (a lack of clinical training for residents). We will re-examine those criticisms individually to see if they remain as valid today as they did in 2003, or if things have changed.

**i.** Clinical Interest: In this regard, we are pleased to report that there has been a change, but that change is more subjective than objective. By that we mean that it is our perception that there is an increase in enthusiasm for acquiring clinical skills, but we have no way of verifying, let alone quantifying it, based on concrete evidence.

Nevertheless, our perception is that there is an unmistakable and new-found –and much-needed!– increase in enthusiasm for clinical learning among the students with whom we interacted. This was amply demonstrated in several ways on this visit at a "bedside" teaching session in a classroom conducted by one of us (RHR) to demonstrate History-taking and Physical Examination techniques, using a student volunteer.

In the first place, the session was attended by approximately 35 senior students (5th and 6th year), a number that is impressive beyond description, because it is at least four times greater than the attendance at any other interactive session either of us has conducted at Keio, whether at the bedside or for PBL! Second, every one of the attendees stayed for the entire time, despite the fact that it lasted for a full three hours. Third, none of the attendees fell asleep, in contrast to previous observations made by us at didactic sessions attended by similar numbers of students, when at least half the class was observed to be asleep at any given time.[2]

There was something else, too, to add to their attendance in previously unheard-of numbers and the palpable excitement they exhibited, and this was the most stunning of all. It was their willingness to not only answer questions, but to actually ask questions themselves, instead of simply sitting silent like automatons, neither asking nor answering questions. It was delightful beyond description for us to see the participants to abandon this notorious characteristic of the Japanese student, which we have termed "passivity" in the past,[1–3,6] and which we have hitherto found to be all-pervasive and all-encompassing. The enthusiasm and excitement that they displayed for learning H&P skills is a truly significant development because it is a key element for making clinical thinking (*"Rinsho Shikokate"*) and clinical decision-making (*"Rinsho Suiron"*) an integral part of student training at Keio.

**ii.** Clinical teachers: One major contributor to the awakening of interest and associated abandonment of passivity is the presence on the wards of a still miniscule cadre of faculty members who are truly dedicated to the cause of teaching. One of these is Dr. TomoharuYajima. He occupies a fully funded teaching position in the Division of Gastroenterology and is a constant and indefatigable presence on the wards. I have rounded with him in the past and have found him to be committed to both clinical medicine and bedside teaching. Students assigned to his ward are surprisingly interested in clinical training, of which one small, but telling example is their occasional willingness to even perform a digital rectal examination. The significance of this will not escape those who are familiar with the abhorrence with which the average Japanese citizen, whether physician or patient, views the very thought of performing or being subjected to such an act!

For all of these reasons, it is safe to say that this is the

first time that we have sensed this degree of excitement for clinical bedside learning (as opposed to book learning), and it seems as if the "contagion" is beginning to spread through the student body, instead of being restricted to only the handful of those who might be considering training in the US, as it has on our trips in the past.[1,4] The efforts of the leadership to encourage teaching and to pay for it (through salary support, even if not yet through promotions) must be directly linked to this tremendous change in student behavior.

It is unclear, however, how much hands-on clinical instruction the students receive across the board in other specialties and other wards. One can only hope that the growth of these emerging signs of clinical interest is fostered by selecting more such faculty members in the Department of Medicine.

We have recommended in the past that salary support for at least one FTE be provided to cover the teaching activities of one member of the faculty in each division, whether this is devoted to a single attending, like Dr. Yajima (or Dr. Toru Sato of Cardiology in the past, prior to his recent departure), or divided between different attending faculty who collectively share the burden over the week. This would be essential for the appreciation of clinical learning to be fostered among the students and for the importance of clinical teaching to be impressed upon the faculty.

**iii.** Clinical training for Residents: This is one area of impending change that might be even more significant (if that is possible!) than the previous ones we have mentioned. For the first time in the past 6 years, we sense that there is an opportunity to make truly meaningful changes in an area of medical education which we had given up as a "lost cause": residency training (also called "Graduate Medical Education" or GME in the US).

Readers of earlier papers in this series will recall that this aspect of medical education at Keio was one that we did not have much hope of reforming.[1,2] The reason for this was our belief that it could never change as long as residents remained under the iron-fisted control of the Department Chairs. After all, it would be impossible to enforce uniform standards of training for residents across different departments if training remained completely under the internal control of departmental Chairs. Reform was made even more impossible by the fact that residents themselves accepted their inferior status as bonded servants who should be grateful simply for the opportunity to apprentice with their mentors.

We have also since learned that the reason for it is that most residents, if not all of them, occupied "non-salaried" positions, receiving nothing but a small stipend that was given at the discretion of the Chair. Yet, these residents were shown on the books as being salaried, as required under the rules established by the Ministry of Health. (Parenthetically, to those familiar with the all-encompassing oversight and control of a GME Office for every residency program in the US, this would be unimaginable in the modern day, but that is neither here nor there.) What is relevant is that the budgetary allocation of the funds for residency training from the Dean's office left it to the individual Chairmen to distribute these funds according to their departmental priorities. When one understands that, in Japan, academic priorities give pre-eminence to research at all costs, it is not surprising that the bulk of these funds never reached the intended recipients. When one factors in the absence in Japan of any oversight mechanism like the ACGME, even with the recent introduction of a mandatory two-year residency for all medical graduates, such practices become inevitable.

One begins to comprehend, in the light of the foregoing, why residents would be treated by faculty as being little more than the equivalent of "slave labor" –and just as inevitable that the residents themselves would resign themselves to being such! My own experiences on the wards at Keio are a testament to the pernicious prevalence of these attitudes in the past, as I have described in earlier papers, including one memorable occasion when a hapless resident was reduced by his mentor to tears in my presence for not knowing the answer to a question.[1]

Such attitudes and traditions, in our mind, presented a formidable challenge to the task of reforming GME, which is why we resolutely stayed away from making any suggestions for drastic change in this area of medical education. In particular, it was our feeling that the first step towards any meaningful reform of GME would be for these young doctors to be liberated from the control exerted by their mentors. To us, that was unimaginable in the Japanese academic medical structure, with its *"ikyoku koza"* system steeped in feudal traditions.[10] Add to this the fiscal constraints we described above, and our fatalistic acceptance of the impossibility of reform becomes understandable.

To our astonishment, however, the authorities at Keio have proven us wrong, thanks to their willingness to confront and change such age-old traditions. Through a truly audacious move, that we understand was Dean Suematsu's own brainchild, the budgetary allocation of funds for residents' salaries is no longer assigned to the individual Chairmen, but is administered via an independent mechanism that is controlled through the Dean's office. (Parenthetically, once more, for those familiar with the US system, one begins to see the first nascent signs of a GME office taking shape in this move away from departmental control to independent control of residency funds.)

Thanks to this fundamental change (which took a lot of courage to push through) reform of GME is now not only possible, but might even succeed. In one swift stroke, it has liberated the entire GME system and opened up a fantastic opportunity for meaningful reform.

In this regard, even more importantly, the Dean's own interest in "competency-based residency training" (as noted above, he is the recipient of a large grant to fund this) could make the reform of GME at Keio and, by extension, in Japan more than just an impossible dream. The appointment of Dr. Michito Hirakata to lead the effort in the Department of Medical Education is yet another bold move that exemplifies the forward-thinking and anticipatory approach to reform that we have seen consistently at Keio University School of Medicine. If this should come to pass, then Keio could become a true pioneer in the field of GME in Japan, particularly if a practical and acceptable method is actually created for assessing the GME competencies in the Japanese context.

***Summary of the Current State of Teaching at Keio Compared to 2003:***

*What has changed*: First, the burgeoning interest among students in clinical skills training is a welcome development which can only be attributed to the appointment of clinical teachers on the wards. Second, the liberation of the residents from the fiscal control of their mentors is as revolutionary as it is stunning.

*What remains to be done*: Both of the changes described above present an amazing opportunity to reform the structure and quality of GME at Keio and, by extension, for Keio University to become a true pioneer of medical education in Japan. In both these areas, the leadership at Keio has demonstrated a willingness to challenge dogma and tradition with solutions that are practical and achievable in the Japanese context. These are clearly, just the first steps, and it will be the work of building on these initial steps that will determine if Keio is in the vanguard of the clinical reform movement. However, the fact that the initial work has been done means that the next steps will be that much easier to take. What is astonishing is that student interest should be increasing despite the desperately thin resources that are available. These resources need to be expanded quickly, because one can only imagine what might happen if there is any increase in number of dedicated teachers on the wards.

## 5. Is There an Emphasis on Teaching Students a Comprehensive Understanding of Clinical Problems at Keio University School of Medicine?

The complete lack of exposure to GIM is the second area, other than the lack of clinical training and teaching, for which we have reserved our severest criticism in our initial assessments of the state of medical education at Keio.[1,2] We have described the background and consequences of this lack in great depth in an earlier paper, so we will not revisit those here.[3] What is relevant is that nothing has changed in this regard, simply because there is no GIM department at Keio. This remains a crippling constraint preventing students from developing the broad perspective on clinical decision-making and the overarching understanding of clinical problems that only generalists possess. As others also have noted,[11] even the so-called "internal medicine" exposure that medical graduates receive as part of their 2 year mandatory residency training is really nothing more than a string of successive subspecialty rotations. These are ostensibly designed to cover all the individual parts of "general" medicine but cannot provide the overarching perspective of the patient as a whole that is so lacking.

We are fully aware that this is not unique to Keio University School of Medicine. We have bemoaned the lack of trained practitioners of GIM across Japan, extending from Tokyo[1–4] to the far north (Sapporo[7]) and the extreme south (Okinawa[6]), all from personal experience. We have also verified that it encompasses virtually all parts in between, according to the testimony of innumerable physicians from different parts of the country to whom we have spoken, confirming similar observations by others.[12,13] Obviously, this is a lack that will not be filled in a lifetime, if ever, given the widespread societal disdain of non-specialists in Japanese, and the inferior status that is accorded by the Japanese medical fraternity to those who choose to become generalists. Just as obviously, the solution to this seemingly intractable problem has to be found within those same uniquely Japanese constraints that make it so intractable.

This was the thinking that underlay our recommendation in our "Blueprint" that Keio University should use the undoubted strength of its Emergency Department (ED) to provide students with the broad perspective that they so desperately need. The background for this recommendation bears revisiting, because it is through this mechanism that Keio University could find the solution that Japanese medical education needs so desperately.

The ED at Keio is the ideal place to give students and residents a broad perspective of clinical problems (and the comprehensive understanding that only generalists can provide) because of the following reasons, some unique to Japan, others unique to Keio:

**i.** ED doctors are the only physicians who have anything resembling a broad perspective of medicine among the otherwise terminally super-specialized medical fraternity in Japan.

**ii.** ED doctors at Keio actually admit patients to what can only be described as an "acute medicine service" except that it is overseen by ED doctors (i.e. they are responsible for post-ED inpatient care in an ED ward).

**iii.** ED doctors act as attending physicians on patients admitted to the ED ward, overseeing all aspects of care, and thus function as the equivalent to hospitalists on this "acute medicine service".

**iv.** The acuteness of the inpatient problems they treat means that they also function as intensivists!

**v.** The breadth of acute problems they encounter and manage means that they also function as generalists. In fact, the list spans the whole spectrum of medicine, not just internal medicine, but also includes surgery, trauma, gynecology, obstetrics... the list goes on. For instance, we recall seeing a case of a Acute Spinal Subdural Abscess in the ED ward on one trip, which would properly belong on a Neurosurgical ward in many other countries. Yet, the management was being overseen capably by the ED team.

**vi.** The ED is the only place where trainees can escape the strangle-hold that the "super-specialist" mindset has on their training (and thinking).

**vii.** With an ED rotation being mandatory for both students and residents, the relatively brief stints spent by students and residents in the ED constitue the only time they will receive the crucial "broad-based" clinical perspective that is so deficient in Japanese medical education. Thus, the ED rotation, to our way of thinking, outweighs the importance of any other by several-fold (although this may be unique to Keio, as we will describe below). In that sense, ED doctors at Keio fulfill the teaching role that is traditionally filled by internists in the US!

Add to these, the very happy convergence of two events, and one senses that Keio may be on the verge of stumbling upon that uniquely Japanese solution that is so desperately needed. One is the appointment of Professor Shingo Hori as Chairman of an independent Department of Emergency Medicine. The other is a statement that Professor Hori made during a meeting with us to discuss medical education, that he was determined to "make the ED the place where students and residents receive the best teaching and training of any department at Keio".

The significance of this was not lost on us, because Professor Hori is someone who we identified very early as a visionary with a real dedication to teaching.[1] Therefore, it was particularly gratifying to us that a follow-up question, based on the seven points highlighted above, evoked Professor Hori's eager agreement that his department was ideally suited to fulfilling the multiple roles of "generalist", "intensivist" and provider of broad and comprehensive clinical perspectives across the spectrum of medicine.

This is just the kind of uniquely Japanese solution that is needed to change the complexion of medical education in Keio University and, by extension, Japan. For this to happen, however, the leadership at Keio must acknowledge that the current two-week rotations for students and residents in the ED are pathetically inadequate for the purpose. We have recommended to Professor Hori that, at the very minimum, there should be an ER rotation of one month in each of the two clinical years in medical school and the two-year mandatory residency period. In fact, to do real justice to the need, two month rotations would be ideal. However, we are also conscious that the faculty resources available to Professor Hori are limited, which is why we recommend the expansion of the single two week rotation to two one-month rotations. It will be up to Dean Suematsu to make the expansion of the faculty contingent in the ED a priority for the future of medical education at Keio University School of Medicine.

***Summary of the Current State of GIM Training at Keio Compared to 2003:***

*What has changed*: Not much, to this point, which is the unfortunate truth. However, as we have described above, recent events relating to the leadership at the Department of Emergency Medicine mean that Keio University has a tremendous opportunity to craft a uniquely Japanese solution to the twin problems of providing both the broad perspective of clinical problems and the comprehensive approach that is the hallmark of the generalist.

*What remains to be done*: It is vital that exposure to Emergency Medicine be increased as an effective alternative to GIM, taking advantage of the unique features of Keio's Department of Emergency Medicine. For this to happen, though, ED ward rotations must be expanded to one month in each clinical year of medical school and residency. Furthermore, resources must be provided in the ED through salary support for faculty who will carry the teaching load.

## Conclusion

We have made an effort to measure the progress that has been made in reforming medical education at Keio since 2003 using the most difficult yardstick we could muster: our own brutally honest criticism of the state of medical education as we found it then, together with the steps we felt had to be taken to correct the defects we encountered. By this yardstick, the changes that have occurred can only be described as surprising and significant. This characterization is not meant to minimize the magnitude of the task that remains to be completed; that is as large as it is daunting. It is an effort on our part to offer praise in the same spirit of honesty with which we offered the earlier criticism, and with the same disbelief! In other words, just as we could scarcely believe how bad things were at the time, we can state with equal certainty that we would scarcely have believed that six years later such a seismic shift would have occurred. It is a tribute to the farsightedness of the leadership at Keio University School of Medicine that this has occurred.

Looked at another way, our own bullishness with regard to the future of the reform effort is an excellent alternative measure of the progress that has occurred in the past six years. It is reflected in the quality and durability of the relationship we have maintained with those in-

volved in the effort, considering that those ties were first formed under uncertain, even threatening circumstances, and with no assurance that anything would ever come of it, given the harshness of our assessment. Events have since proved that one thing, however, was never uncertain. It was the dynamism shown by all those involved in leading this effort. From the very outset, we were impressed by this characteristic as much as we were astonished by the apparent willingness to break the mold of tradition. Just as creditable was the intellectual honesty displayed in accepting, without the slightest trace of resentment or defensiveness, our withering critique of the state of medical education at Keio as we encountered it in 2003.

We have detailed above a factual account of the progress that has been made, by using an unforgiving yardstick created from that very critique. What is particularly striking, as we look back upon the events that have unfolded over the past six years of this association, is the fact that the major points in our "Blueprint for Reform" have been duly considered by the very people who might be most likely to be offended by the criticism, and many are in the process of being implemented. Finally, and most gratifying of all from our personal perspective, is that our ongoing association with the reform effort, through repeated annual invitations from successive Deans to visit Keio, affirms the validity of our criticisms. It also confirms that the reform effort not only survives but thrives. As an aside, one of the happier outcomes of the amount of progress that has been made at Keio since our first visit is that it relieves us of the unfounded charge that our criticism was, at best, misplaced or a misperception, and at worst, unfounded and unjust.

Subsequent events, as we have recorded above, have proven that all of our early intuitive assessments were correct, and that the future of reform at Keio Medical School is assured, thanks to the continued efforts of those who have inherited the mantle of leadership there. That leadership at this crucial stage is vital to maintaining Keio University's position as a premier institution for medical education in Japan.

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